

# Science of Happiness Practices of College English Instructors towards the Development of NeuroELT Pedagogy: The CEU Experience

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## ABSTRACT:

This study was conducted to determine the Science of Happiness practices of College English instructors of Centro Escolar University (CEU), Philippines, the results of which served as basis for the development of NeuroELT pedagogy activities. Adopting the mixed method of investigation using focus group discussion, semi-structured interviews and structured questionnaires as data gathering instruments, the study involved 19 instructors of College English and 580 students enrolled in Communication Skills 12-Writing Skills for Improved Academic, Career and Life Skills from the 3 campuses of the said institution. The researcher then selected the instructor as well as the student participants via purposive and purposive random sampling designs respectively. Overall, the study encompassed two phases: (1) Needs Analysis and (2) Design and Development. The findings revealed that the College English instructors implemented various instructional strategies that support the brain-compatible principles relevant to Positive Psychology such as collaboration, challenge, physical movement and choice but deficient in other significant NeuroELT attributes such as context-orientedness, differentiated instruction, prediction, novelty, positive surprise, creativity, simulation and exploration. The learners attested, however, that they only benefited to a moderate extent from the strategies that their instructors utilized specifically in their knowledge, skills and attitudes despite the instructors' effort of integrating various Science of Happiness themes in their classes such as the VIA Character Strengths and Virtues of Justice, Humanity, Wisdom and Knowledge, Transcendence, Courage and Temperance. It was also found that though the College English instructors claimed that they practice Science of Happiness through savoring good things as they happen, valuing their friends and family, cultivating a "gratitude" attitude, coping with stress a lot better, reminiscing good things, doing kind things and fostering forgiveness but not much on taking care of one's health, they may need to undergo professional trainings, seminars and workshops spearheaded by experts on NeuroELT or brain-compatible teaching strategies in College English especially those that promote Science of Happiness so that they will equip themselves with more relevant and adequate tools to apply various NeuroELT attributes to be able to experience total wellbeing as well as promote the holistic learning of the students in College English. Finally, Centro Escolar University may explore the possibility of integrating in their English Language curricula or possibly in other disciplines the Science of Happiness (Positive Psychology) to produce graduates who are totally imbued with competence and character carefully designed for a rewarding global employment while making a name as one of the few universities in the Philippines that advocates brain-compatible education vis a vis positive schooling.

**Keywords:** Positive Psychology, Science of Happiness, NeuroELT, Brain-based Learnings, Brain-Compatible Learning

## INTRODUCTION

"Happy students learn more. Happy students work longer. Happy students are more enthusiastic." [1].

Undoubtedly, educational psychology adheres firmly to the abovementioned philosophical view in learning which positions the learners' positive emotions at the heart of any significant scholastic endeavor regardless of disciplines. Effective teachers know that the observance of the principles of educational psychology in teaching will help them guide the students' learning [2].

The message from social and affective neuroscience is very clear: no longer can one think of learning as separate from or disrupted by emotion, and no

longer can one focus solely at the level of the individual student in analyzing effective strategies for classroom instruction [3]. In view of this, teachers as the key players in the teaching-learning process are enormously encouraged to develop and employ innumerable strategies to promote a rich and highly stimulating optimistic classroom environment among their students in all levels across disciplines especially in the midst of the challenges brought about by the dynamic, rapidly changing 21<sup>st</sup> century educational landscape.

Recent advances in the neuroscience of emotions highlight connections between cognitive and emotional functions that have the potential to

transfigure our understanding of learning in the context of schools.

Immordino-Yang and Damasio [4] in their article, “We Feel, Therefore We Learn: The Relevance of Affective and Social Neuroscience to Education” underscored: “When we educators fail to appreciate the importance of students’ emotions, we fail to appreciate a critical force in students’ learning. One could argue, in fact, that we fail to appreciate the very reason that students learn at all.”

Educators and researchers have worked diligently to explain a legitimate scientific discipline that overlaps psychology, neuroscience and pedagogy. The result is educational neuroscience or simply neuroeducation – the convergence of neuroscience and education [5]. Also known as brain-based or brain-compatible learning, neuroeducation deals with teaching methods, lesson designs, and school programs that are based on the latest scientific research about how the brain learns, including such factors as cognitive development—how students learn differently as they age, grow, and mature socially, emotionally, and cognitively.

Positive psychology is an important, emerging and interesting field associated with Mind, Brain and Education (MBE) science or neuroeducation. It has captured the attention of numerous concerned educators across the globe including the researcher himself who encountered the said topic when he pursued his Trainers’ Certification Course in Teaching English to Speakers of Other Languages (TESOL) in October 2014. *Time* magazine has dubbed it more popularly as the “Science of Happiness” based from its January 17, 2005 issue entitled, “*Special Mind and Body*”.

The influence of the Science of Happiness (positive psychology) has stepped up when numerous researchers attempted to determine its practical applications in the classrooms of the 21<sup>st</sup> century. Certainly, the teachers’ role in promoting positive emotions is considered fundamental as it contributes to the development of the learners’ affective domain aside from their cognitive and psychomotor abilities. Clearly, the instructors’ practices of positive psychology in and out of the classroom can greatly influence the students’ overall learning experiences and outcomes. This reality in fact correlates significantly with the teaching of the English language according to Prof. Marc Helgesen

[6], one of the leading proponents of the Science of Happiness in the English Language Teaching (ELT). In the tertiary level, there is almost no argument that English language competence is considered essential in the midst of the dynamic learning environment. Communicating in English effectively can result to not only to a meaningful social life, but also to better job opportunities in the future. From job interviews to the actual professional world, communication skills are very crucial, and being proficient in English means being able to communicate clearly and effectively [7].

However, over the years, teaching the English language is undeniably a very challenging endeavor especially in most Asian countries including the Philippines where it is considered as a second language.

Some issues and challenges confronted by the educators in the ESL/EFL classrooms today consist of fluency, accuracy, comprehensibility, motivation, attitude towards using English, vocabulary and comprehension. Likewise, it includes clarity of writing, paragraph organization, plagiarism, grammar, usage, test-taking skills and poor retention [8].

Considering how much effort English instructors in the Philippines especially in college put into the English Language Teaching (ELT) since time immemorial, why do the aforementioned problems remain unresolved and students still demonstrate inadequate communication skills as revealed by numerous studies in the past decade? English instructors must remember that language learning came about through emotional signaling – bonding and sharing – rather than using the methods they typically employ in the classroom – the traditional one which often revolves on memorizing what they call surface knowledge. Teachers must be reminded that they should not only provide relevant knowledge to their learners but more so, they must nurture a positive climate that encourage collaboration in the classroom; hence, fostering student achievement in English. This can be made possible through the integration of the Science of Happiness (positive psychology) in the classroom according to the neuroeducation experts.

More importantly, teachers must ensure that the pedagogy they employ in language teaching must be

brain compatible [9]. The abovementioned suggestion summons the language teachers to revisit and reflect on their teaching practices to find out their relevance and appropriateness with regard to the latest research findings in neuroeducation.

Reflecting on these pressing realities, the researcher has realized that there seems to be a considerable need to explore on the College English instructors' practices that pertain to the Science of Happiness (positive psychology) in the teaching of English and to create NeuroELT pedagogy activities derived from the said practices that may be designed to strengthen the competencies of the 21<sup>st</sup> century learners aside from raising the bar of excellence in the English Language Teaching (ELT) in the Philippines. It is his ultimate and noble goal to contribute a number of powerful instructional activities that will truly enrich the learning of English – the international common tongue, thereby providing better opportunities for the Filipinos here and abroad. Since the topic has not been explored comprehensively in his country, the researcher truly considers this scholastic inquiry as something novel, noteworthy and truly beneficial to the ELT and the rest of the academic community.

### CONCEPTUAL AND THEORETICAL FRAMEWORK

Research communities pursue the hypothesis that when teachers teach as though they are primarily responsible for their students' learning, their students will learn more [10]. This implies that teachers must learn continuously by updating themselves with information on the latest theories, trends and practices that may further enhance the way they teach.

For instance, educators in recent years have become much more aware that neuroscience is finding out a lot about how the brain works, and that some of the discoveries have implications for what happens in schools and classrooms.

It all commences with knowing exactly when the individual's brain start to develop. When babies are born, their brains are ready to learn [11]. Like constructing a house, brains are built upon a strong foundation. This starts before birth, and is very important during the first three years of life. Brain cells are "raw" materials — much like lumber is a raw material in building a house, and a child's experiences and interactions help build the structure, put in the wiring, and paint the walls.

Heredity (nature) determines the basic number of "neurons" (brain nerve cells) children are born with, and their initial arrangement. Furthermore, scientists have determined that the neurons for vision begin sending messages back and forth rapidly at 2 to 4 months of age, peaking in intensity at 8 months. It is no coincidence that babies begin to take notice of the world during this period. Scientists believe that language is acquired most easily during the first ten years of life. During these years, the circuits in children's brains become wired for how their own language sounds [12].

Teachers try to change the human brain every day. The more they know about how it learns, the more successful they can be [13].

One of the popular ideas that penetrated the field of teaching in line with neuroeducation is positive psychology simply dubbed as the "Science of Happiness." This field of psychology according to Seligman [14], one of its leading authorities, is about valued subjective experiences: well-being, contentment and satisfaction (in the past), hope and optimism (for the future) and flow and happiness (in the present).

As regards English language teaching-learning, Helgesen [15] explicates that positive, motivated students – engaged with what they are studying and with each other – learn more and approach tasks with more enthusiasm. And the whole time, their brains are releasing dopamine, the neurotransmitter connected to memory, motivation and emotion. Language learning is indeed informed by educational psychology.

The abovementioned supposition that came from Helgesen, one of the active proponents of the Science of Happiness (positive psychology) in the English Language Teaching (ELT) is supported by other experts especially those who are well-versed and have a high regard on neuroeducation which includes Immordino-Yang and Damasio [16], Kelly and Sandy [17], Sousa [18], Wolfe [19], Espinosa [20] among others. According to Helgesen, identifying the instructors' knowledge, attitudes and practices about the Science of Happiness (positive psychology) in their English language classroom will enable the present day researchers to uncover its significance based from the extent of its application in the classroom which may serve as an utmost basis for any noteworthy endeavor in relation to ELT and

to education as a whole. Likewise, results will surely contribute to the existing fund of knowledge about the said discipline to further validate its impact in teaching-learning. “First there is emotion; after that comes cognition,” said Frank Thissen, a Multimedia Didactics and Intercultural Communication professor at the University of Applied Sciences in Stuttgart, Germany. In the midst of a large research on the role of emotions in eLearning, Professor Thissen further explained that while negative emotions tend to make they clearly remember data including the minutest detail, positive emotions tend to help them remember more complex things [21].

Likewise, Sousa [22] strongly agrees that emotions play an important role in the thinking process. He further emphasized in his book entitled, *“How the Brain Learns,”* that emotions often take precedence during cerebral processing and can impede or assist cognitive learning. If individuals like what they are learning, they are more likely to maintain attention and interest and move to higher level learning. Hence, the classroom emotional climate is so important. Lastly, he accentuated that people will participate in learning activities that have yielded success for them and avoid those that have produced failure. This simply explains the impact of the Science of Happiness (positive psychology) in teaching-learning which can also apply in the

English language teaching. This can only be realized if the instructors handling the said subject are actually aware of the rationale and principles of the Science of Happiness (positive psychology) as applied in language education.

Henceforth, driven by the recommendations of previous researchers suggesting that more studies must be conducted as regards the application of the Science of Happiness (positive psychology) in the educational setting including the one of Zaro [23], the researcher decided to examine closely in his dissertation the practices in positive psychology better known as the “Science of Happiness” of the College English instructors at Centro Escolar University, Philippines. In particular, these instructional practices cover the knowledge, approaches, strategies and attitudes associated with the Science of Happiness (positive psychology) that the said instructors do apply in their classes to efficiently move students forward in their learning in their respective English subjects.

Figure 1 provides a vivid picture on how the study was conducted systematically from the beginning until the end.

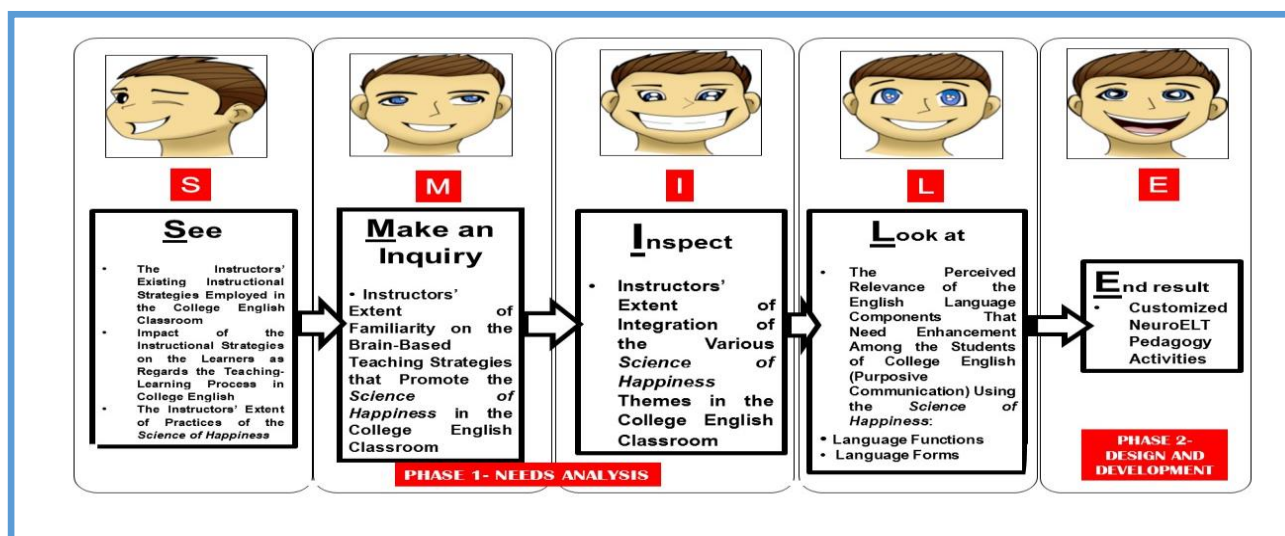


Figure 1. The SMILE Conceptual Framework



The study consisted of two (2) important phases namely: (1) Needs Analysis and (2) Design and Development.

The research paradigm encapsulates the said phases and details all-inclusive steps undertaken in this investigation through the **SMILE** conceptual framework.

This framework which was originally developed by the researcher himself consists of five (5) different positive faces representing the variety of information being investigated from the beginning until the end. Each face is represented with one letter of the acronym **SMILE**. The arrows that lead to each one of the boxes clearly indicate a logical process: Phase 1 begins with **S** which stands for **See: Instructors' Existing Instructional Strategies Employed in the College English Classroom, Impact of the Instructional Strategies on the Learners as Regards the Teaching and Learning Process in College English and the Instructors' Extent of Practices of the *Science of Happiness (positive psychology)***. Examining the specific existing instructional strategies employed by the College instructors in their classes as well as their corresponding impact on the learners in terms of the teaching-learning process enables the researcher to determine exactly if NeuroELT or brain-compatible teaching in College English does exist at present. Likewise, it generates information on how the instructors observe the activities of happy, mentally healthy people outlined in Sonja Lyubomirsky's [24] "The How of Happiness" cited by Marc Helgesen in his talk "ELT and the Science of Happiness". Knowing their specific practices enables the researcher to create suitable activities that are considered essential components of the proposed output. Next is the **M** which means "**Make an Inquiry: Instructors' Extent of Familiarity on the Brain-Based Teaching Strategies that Promote the *Science of Happiness (positive psychology)* in the College English Classroom**. The data obtained from the respondents helped the researcher ascertained the exact amount of information that they possess as regards the said strategies which served as basis for the number of activities that the researcher included in his output.

On the other hand, **I** refers to **Inspect: Instructors' Extent of Integration of the *Science of Happiness (positive psychology)* Themes in the College English Classroom**. The said themes consisted of character strengths and virtues outlined by the VIA Institute on Character [25] in the website at <http://www.viacharacter.org/>. Knowing the degree

of the instructors' integration of various *Science of Happiness (positive psychology)* topics enabled the researcher to determine exactly the amount of effort that they exert in the application of the said discipline enabling him to design appropriate number of activities as part of his output. Further, **L** deals with **Look at: The Perceived Relevance of the English Language Components That Need Enhancement Among the College Students Using the *Science of Happiness (positive psychology)*: Language Functions and Language Forms**. Essentially, the instructors' perceptions on the specific language functions and language forms that need enhancement among the learners using the *Science of Happiness (positive psychology)* in line with the Purposive Communication subject (replacing the numerous College English subjects in the existing General Education curriculum) enabled the researcher to determine notably the specific topics that need to be included in the output. Using reliable statistical tools, data were collected, treated, analyzed and interpreted accordingly under the mentoring of a statistical expert. Finally, Phase 2 led to **E** which pertains to the **End Result** of the research which is the OUTPUT – a customized NeuroELT pedagogy activities. This work might be a significant contribution in the Philippines since there are no existing resources ever produced such as this in the country aside from the fact that this work will be crafted in congruence with Purposive Communication – a new General Education subject which is targeted to be in its massive implementation come Academic Year 2018-2019.

In terms of design and development, the said NeuroELT pedagogy activities in a book format comprised of two parts: First Part presented a Primer on Positive Psychology (*Science of Happiness*) and NeuroELT. On the other hand, the Second Part covered the Main Content which includes the (1) Activity Title; (2) Activity Description and Learning Outcomes; (3) Happiness Practice/Theme (4) Featured Language Function (e.g. Explaining); (5) Featured Language Form (e.g. Present Tense); (6) Materials/Resources Needed; (7) Procedures; (8) Sample Prompts (e.g. language expressions) and (9) Assessment. Overall, the said NeuroELT pedagogy activities consist of simple and practical pursuits that are designed to inspire both the English instructors and the learners as they work together intentionally to practice the *Science of Happiness* while enhancing their knowledge, skills and attitudes in the English language.

Finally, the researcher hopes that the results of his investigation will set a precedent in establishing

more empirical studies concerning the integration of the Science of Happiness (positive psychology) in the teaching of English in the Philippines which involves the development of more NeuroELT pedagogy activities so as to further validate the findings of the previous researches conducted or possibly formulate new theories along this discipline.

Theoretically, this study is anchored on the **PERMA model or well-being theory** of Martin E. P. Seligman that was introduced in his book entitled, *"Flourish: A Visionary New Understanding of Happiness and Well-being"* in 2011. The said model promotes more than happiness but a life that is flourishing, a life of well-being – a life worth living. The theory is a mixture of personally practical, scientifically-grounded wisdom and an inspiring call-to-action in government, business and most essentially in education.

Seligman is an American psychologist, educator and author. Further, he is considered a pioneer of Positive Psychology (the term coined by Abraham Maslow) not simply because he has a systematic theory about why happy people are happy, but because he uses the scientific method to explore it [26].

As the Father of the blossoming Positive Psychology, Seligman promotes a potent antidote to the traditional "disease model" of psychology, which focuses on how to relieve suffering rather than how to amplify well-being [27]. In one of his speeches delivered at the University of Michigan in 2010, he articulated that human beings have a strange heritage about the positive and negative sides of life. "Our heritage comes from Schopenhauer and Freud who told us that the best we can ever hope for is to keep our misery and suffering to a minimum," says Seliman [28]. Seligman strongly believes that there is more to life than minimizing suffering. Thus, he suggested the possibility of a positive human future, for human beings to *flourish*, and how science can help individuals understand more about the elements of the positive side of life and how they might be achieved. This quest begins with the prime movers in the classroom – the teachers.

In particular, PERMA posits that well-being has five (5) measurable elements that count toward it namely: **Positive** emotions - how to feel good. Seligman encourages spending time each day to reflect on good things that happened that day to foster the positive; **Engagement**- how to be fully absorbed in activities (flow state). Seligman points out that: "When we're truly engrossed in a task that

demands our attention, our sense of self recedes and time feels as if it has slowed or even stopped; **Relationships** - how to be authentically connected to others. Seligman states that: "Our bonds with others are "the best antidote to the downs of life and the single most reliable up," he says. "And research literature shows that loneliness is one of the huge factors in anxiety and depression. Human beings are built for relationships"; **Meaning** - how to lead a purposeful existence. As defined by Seligman, this is a sense of "belonging to and serving something that you believe is bigger than the self," such as religious institutions or political causes; and **Accomplishment** - how to achieve. Certainly, according to Seligman, achievement is one thing people often pursue as an end in itself, even if everyone has a different idea about what it entails [29]. With this theory, Seligman gave a new flavor to Positive Psychology. Positive psychology is not only happiness. It is NOT merely measuring life satisfaction but, more importantly, measuring well-being. It is about well-being theory - to increase the amount of flourishing in one's life and on the planet [30]. Clearly, Seligman's PERMA significantly enhances the learners' affective domain which deserves adequate attention aside from the cognitive and psychomotor. In the educational literature, nearly every author introduces their paper by stating that the affective domain is essential for learning, bit it is the least studied, most often overlooked, the most nebulous and the hardest to evaluate of Bloom's three domains. In formal classroom teaching, the majority of the teacher's efforts typically go into the cognitive aspects of the teaching and learning most of the classroom time is designed for cognitive outcomes. Thus, there is a significant value in realizing the potential to increase student learning by tapping into the affective domain [31].

This theory was purposively chosen by the researcher for it highly complements with the rationale or the main thrust of the current study. Pertinently, it serves as the central framework of the proposed customized NeuroELT pedagogy activities of the researcher as supported by the findings of the study emanating from the series of problems posed. In particular, the respondents' extent of integration of the character strengths and virtues in their respective English classrooms intended to be assessed in the questionnaire complements with this theory. The proposed activities will revolve on those positive psychology ideas that coincide with the **PERMA or well-being theory** of Seligman which have bearing to the findings of Mind, Brain and Education (MBE) science. Some of the brain-compatible strategies that will be employed in the

said NeuroELT activities may not be so new or esoteric to the instructors. In fact, some of the College English instructors might have been implementing the said strategies in their respective classrooms but may not be so familiar with them perhaps due to lack of information obtained from scientific investigation. However, with the researcher's fervent inclination towards innovative pedagogies in line with the Science of Happiness (positive psychology), he will conceptualize and develop novel and creative ELT activities based from brain-compatible strategies drawn from his scholarly readings, reflections and interviews from the experts of Mind, Brain and Education (MBE) science such as Marc Helgesen, Sonja Lyubomirsky, Curtis Kelly, Robert Murphy among others who have deeply inspired the researcher to venture into NeuroELT pedagogy activities. The said activities that the researcher developed is intended primarily for the College English instructors in the Philippines whose primary mission is to elevate the level of the communication skills of their learners in preparation for their future career. With an increased awareness of how the brain processes information especially the role of emotion; however, teachers are beginning to understand why these strategies work and they can therefore select those that fit the needs of their students in particular learning situations inside the College English classroom.

### STATEMENT OF THE PROBLEM

This study was an attempt to investigate on the Science of Happiness (positive psychology) practices of the College English instructors of Centro Escolar University, Philippines, the results of which served as basis for the development of NeuroELT pedagogy activities.

In particular, this research sought answers to the following questions:

1. What were the existing instructional strategies employed by the College English instructors in their classes?
2. What was the impact of the said instructional strategies utilized by the instructors on the learners as regards the teaching-learning process in College English?
3. To what extent did the College English instructors practice the Science of Happiness?
4. How familiar were the instructors on the brain-based teaching strategies that can promote the Science of Happiness in the College English classroom?

5. To what extent did the instructors integrate various Science of Happiness themes in the teaching of College English?
6. How did the instructors perceive the relevance of the following English language components to be enhanced among the students of College English (Purposive Communication) using the Science of Happiness:
  - 6.1 Language Functions
  - 6.2 Language Forms?
7. What NeuroELT pedagogy activities on the Science of Happiness were developed in response to the findings?

### LITERATURE REVIEW

Research findings from the emerging field of Mind, Brain and Education (MBE) science or neuroeducation all supported the fundamental role of positive emotions in every learner's quest for a worthy existence. As emphasized by Sousa [32], Santrock [33], Fredrickson, Mancuso, Branigan and Tugade, [34], Alber [35], Seligman [36], Gutierrez [37], Datu [38] and Helgesen [39] among others, students are more likely to remember curriculum content in which they have made an emotional investment. For this to happen, teachers often need to utilize strategies and activities that get the students emotionally involved with the learning content. Emotions control the students' attention, influence their motivation to learn, modify the choice of learning strategies, and affect their self-regulation of learning. Furthermore, emotions are part of students' identity, and they affect personality development, psychological health and physical health. From an educational perspective, emotions are important because of their influence on learning and development, but students' emotional wellbeing should also be regarded as an educational goal that is important in itself. In relation to the present study, the researcher would like to support the conviction of the abovementioned experts as he plans to create customized NeuroELT pedagogy activities in accordance with the identified Science of Happiness practices of the instructors of College English.

Further, Immordino-Yang and Damasio [40], Willis [41], Espinosa [42] among others strongly believed that emotion and cognition are dynamically intertwined and interdependent in terms of both neurology and psychology. Emotion and cognition not only interact, but their integration is necessary for adaptive learning. Even with the focus on the acquisition of academic skills educators are still producing many students that fall short in this area. Griffith & Nguyen [43] stressed: "What good is the

acquisition of a vast range of academic skills if we are unable to integrate them?" Students need to be able to communicate, value, organize and characterize to effectively utilize and make sense of what they have learned. It is difficult to achieve even the highest levels in the cognitive domain if we don't teach and develop those complementary skills in the affective domain [44]. The said facts will surely be highlighted in the proposed output of the current research so as to equip the instructors with the adequate information about the vital role of emotion and cognition, the extent of which will surely depend upon the results of the study.

The role of the teacher in facilitating a happy classroom specifically in the English Language Teaching (ELT) is truly fundamental. The teachers are the leading light and the key players in any learning situation. Hence, they are encouraged to develop among themselves a happy or positive disposition. It commences with an assessment of how they apply the activities of happy, mentally healthy people based from Sonja Lyubomirsky's [45] "Eight Steps Towards a More Satisfying Life". This has been reiterated all throughout by Helgesen [46] who adheres to the findings of Lyubomirsky [47] in her book "The How of Happiness" that 50 percent of happiness of an individual is genetically predetermined, while 10% is due to life circumstances, and 40 percent is the result of one's own personal outlook [48]. It simply means that the deliberate or thoughtful actions of the teachers in and out of the classroom matter especially those that concern the promotion of a happy and safe learning environment among their students. This is the main reason for the inclusion of this topic in the current study.

The application of the Science of Happiness in the College English Language classroom via NeuroELT pedagogy activities is well-supported by the 12 Brain Rules of Medina [49] as well as the other brain researches conducted by Murphy and Kelly and Sandy [50]. According to the said experts, the English language skills of the learners can only be enhanced with the help of brain-friendly activities that the teacher will develop and implement inside the classroom taking into consideration the positive emotions of the learners. This will surely be incorporated in the present investigation as the researcher prepares brain friendly activities for the Purposive Communication – the new General Education curriculum subject.

Undoubtedly, the positive impact of the Science of Happiness among the learners in the classroom

including students of English were also proven via the findings of the researchers such as Zaro [51], Layous, Nelson and Lyubomirsky [52], Seligman [53], Huebner, Gilman and Suldo [54], Noddings [55] among others.

Advocates of the Science of Science of Happiness (positive psychology) in the English Language Classroom such as Helgesen [56] and Kelly and Sandy [57] deem that the discipline serves as an effective means to develop the communication skills of the learners in English through NeuroELT pedagogy activities. This includes paying attention to the language functions and forms in English Language Teaching (ELT). Likewise, it covers the enhancement of character strengths and virtues. More importantly, the integration of happiness ideas in the ELT not only serve as a springboard for the discussion of language lessons but serve as a meaningful involvement as well for both the teachers and the students who both aim for not only a life of happiness but flourishing as embedded in Martin Seligman's PERMA or Well-Being Theory. As mentioned in the previous chapter, the NeuroELT pedagogy activities that he will develop supports the ideas outlined in Seligman's PERMA.

The development of NeuroELT activities is a laborious task that involves careful planning as explained by Gregory and Parry [58]. However, these instructional activities may have been familiar to the teachers – some may have been forgotten, others may not have been used in a while. Ilustre and Opina's [59] framework and procedure for developing course materials that integrate the NeuroELT strategies exploration, personalization, novelty, multi-sensory and emotion gave more direction to the current study for they clearly support the ideas of the prime movers in the field of NeuroELT particularly Helgesen [60], an active advocate of the Positive Psychology and likewise dubbed as the "Father of NeuroELT".

With regard to the Science of Happiness themes of joy, gratitude, serenity, interest, hope, pride, amusement, inspiration, awe, love, forgiveness and a lot more, Helgesen [61] and Seligman [62] are convinced that these can work well not only in the English language but in other disciplines as well. Integrating the said topics are assumed to be relevant in the enhancement of the well-being of both the teachers and the learners in the 21<sup>st</sup> century.

In view of the foregoing countless relevant ideas backed up by scientific inquiries, it appears that the



Positive Psychology better known as the Science of Happiness had established its relevance as a discipline. However, its application in the English Language Teaching (ELT) as manifested by the practices of the College English professors particularly in the Higher Education Institutions (HEIs) in the Philippines need to be explored. This is to be followed by the development of NeuroELT pedagogy activities with respect to the findings of the study.

### METHODOLOGY

The study adopted the mixed methodology of investigation in gathering the relevant data needed to be able to resolve the problems of the study. In particular, the said method employs both the quantitative and qualitative approaches bringing together diverse viewpoints in order to create a worthier grasp of the research problems. The said method which involves triangulation is very much appropriate with the study since it attempts to establish not only a vivid but an in-depth picture of the Science of Happiness practices of the College English instructors of Centro Escolar University through an all-inclusive investigation supported by various data gathering instruments duly validated by the experts. The method is characterized by the utilization of two or more methods used to confirm, cross-validate, or corroborate findings within a study [63]. In particular, it attempted to delve deeply into the brain-compatible strategies employed by the instructors in the teaching of College English that promote the Science of Happiness. Thereafter, relevant and appropriate NeuroELT pedagogy activities were then developed in accordance with the findings.

The participants of the study were primarily composed of the 19 College English Instructors who taught Communication Skills 12-Writing Skills for Improved Academic, Career and Life Skills in any of the three (3) campuses of Centro Escolar University, Philippines during the Second Semester, School Year 2014-2015 and were likewise given teaching assignments for the Second Semester, School Year 2015-2016. For confidentiality purposes, the instructors were coded accordingly: Instructors 1-19. The instructors who were involved in the study had a mean age of 39 years old. Majority, 12 or 63.20 percent of the instructor participants were female while 7 or 36.80 were male and were mostly single as indicated by the frequency of 12 or 63.20 percent while the remaining 7 or 36.80 percent were married. None of the participants were neither separated, divorced nor widowed. Almost half, 10 or 52.60 percent of the instructor participants obtained

Master's degrees while 5 or 26.30 percent were Bachelor's degree holders. Meanwhile, only 4 or 21.10 percent have finished their Doctorate studies. As exhibited therein, 4 or 21.10 percent of the instructor respondents were graduates of Master of Arts (M.A.) in Teaching. On the other hand, 2 or 10.50 of them have obtained Bachelor of Arts (A.B.) major English and Master of Arts in Education (M.A. Ed.) in English respectively. The rest of the instructors hold courses such as Bachelor of Arts (A.B.) in Mass Communication-Broadcast, Bachelor of Science (B.S.) in Psychology, Master of Arts (M.A.) in Speech Communication, Master of Arts (M.A.) in Literature, Master of Arts (M.A.) in Language Education, Bachelor of Science in Secondary Education (B.S. Ed.) major in English, Doctor of Philosophy (Ph.D.) in Curriculum and Supervision, Doctor of Philosophy (Ph.D.) in Southeast Asian Studies, Master of Arts (M.A.) in Applied Linguistics and Doctor of Education (Ed.D.) major in Educational Management accordingly. The instructors involved were all full-timers.

With regard to the average monthly net income of the instructors, 6 or 31.60 percent do earn Php30,000-PHP34,999. On the other hand, 5 or 26.30 percent receive a net salary of Php15,000-PHP19,999. Likewise, 3 or 15.80 collect a compensation of Php20,000-PHP24,999 and Php25,000-PHP29,999 respectively. Finally, it was noted that there was 1 or 5.30 percent who receive a salary ranging from Php40,000-PHP44,999 and above Php45,000 accordingly. Finally, the instructors had an average of 17 years of experience in teaching English. The results indicate that a lot of them fit in to the "expert" group of teachers who are capable of contributing valuable learning experiences among the learners of College English.

To determine the instructor participants of the study, the researcher employed the purposive sampling. Specifically, the following inclusion criteria governed the selection of the instructor participants involved in the research:

1. The College English instructors must have teaching assignments in Communication Skills 12-English for Improved Academic, Career and Life Skills for the Second Semester, School Year 2015-2016 in any of the three (3) campuses of Centro Escolar University – Manila, Malolos or Makati (Gil Puyat or Legazpi Village units).
2. The instructors must have taught Communication Skills 12-English for Improved Academic, Career and Life Skills during the Second Semester, School Year

2014-2015 in any of the three (3) campuses of Centro Escolar University – Manila, Malolos or Makati (Gil Puyat or Legazpi Village units).

3. College English instructors who have exclusively taught World Classics, Asian Literature, Writing Skills for Specific Purposes and Speaking Skills for Effective Communication and Oral Presentation subjects were excluded from the study.

On the other hand, student participants were likewise chosen via purposive random sampling according to the following inclusion criteria:

1. The students must have taken Communication Skills 12 - English Skills for Improved Academic, Career and Life Skills during the Second Semester, School Year 2014-2015 in any of the three (3) campuses of Centro Escolar University – Manila, Malolos or Makati (Gil Puyat or Legazpi Village units).
2. They must have taken the aforementioned subject from any of the College English instructors involved in the study.

Meanwhile, the study has utilized the data gathering instruments such as Focus Group Discussion (FGD), semi-structured interviews and researcher-made questionnaires. These instruments were duly validated by experts in NeuroELT, neuroeducation and English Language Teaching (ELT) including Teaching English to Speakers of Other Languages (TESOL) prior to its actual administration among the participants.

## RESULTS

After a thorough examination of the data, the following findings are hereby presented:

### *1. Existing Instructional Strategies Employed by the College English Instructors in their Classes*

The College English instructors implemented various instructional strategies such as individualized, cooperative group, direct instruction, use of inquiry, small group work, classroom discussion, role playing/dramatization and games that promote NeuroELT principles relevant to Positive Psychology such as collaboration, challenge, physical movement and choice. However, context-orientedness, differentiated instruction, prediction, novelty, positive surprise, creativity, simulation and exploration among others seemed inadequate.

### *2. The Impact of the Instructional Strategies Utilized by the Instructors on the Learners as Regards the Teaching-Learning Process in College English*

Most of the learners attested that they benefited from the instructional strategies that their instructors utilized specifically in their knowledge, skills and attitudes to a *moderate extent* only. Overall, it could be noted from the results that the learners' *Attitudes* have received the highest value (Mean=3.4144; SD=.44261) followed by *Knowledge* (Mean=3.22; SD=.4399) and *Skills* (Mean=3.1315; SD=.48815).

### *3. Extent of the College English Instructors' Practice of the Science of Happiness*

It was found out that the instructors outshine in noticing good things as they happen (Mean=3.8526; SD=.26535); taking time for one's family and friends (Mean=3.8421; SD=.37463), saying "thank you" or expressing gratitude (Mean=3.7763; SD=.23415) and learning to deal with problems and stress (Mean=3.7519; SD=.27702). Meanwhile, though they *always* practice the rest of the activities, it seems that they need to nurture some of the practices that relate to the following: remembering good things (Mean=3.7456; SD=.37005); doing kind things (Mean=3.6140; SD=.39695) and forgiving people who hurt them (Mean=3.5789; SD=.45599). Finally, the instructors seem to abandon their duty to take care of one's health and body (Mean=3.4079; SD=.32501) as they only practice this act *sometimes*.

### *4. Extent of Familiarity of the Instructors on the Brain-based Teaching Strategies that can Promote the Science of Happiness in the College English Classroom*

The College English instructors exhibit an overall *moderate familiarity* with the brain-based instructional strategies that may promote Science of Happiness in the College English Classroom: Cooperative Learning, Metacognitive, Creative Thinking and Graphic Organizers. Among the strategies that they were moderately familiar comprised of "I have...Who has?", "Six Hat Thinking," "Carousel Brainstorming," "Life Preserver" and "KWL."

On the contrary, the instructors have confirmed in the FGD their *extreme familiarity* with the advance organizers such as "Games" and "Video Clips" as they are fond of utilizing these strategies in their English classes specifically in Communication Skills 12.

### *5. Extent of the Instructors' Integration of the Various Science of Happiness Themes in the Teaching of College English*

The instructor respondents boldly admitted that they incorporated a majority of them in their classes

to a *very great extent*. Themes on *Justice* (Mean=3.7895; SD=.56885) ranked first followed by *Humanity* (Mean=3.7719; SD=.63879), *Wisdom and Knowledge* (Mean=3.6947; SD=.50495); *Transcendence* (Mean=3.6667; SD=.60604) except for some practices in *Courage* (Mean=3.5789; SD=.59543) such as Bravery (valor) and *Temperance* (Mean=.35658; SD=.6392) like Forgiveness that were rated to a *moderate extent*.

#### 6. Instructors' Perceived Relevance of the English Language Components to be Enhanced Among the Students of College English (Purposive Communication) Using the Science of Happiness

##### 6.1 Language Functions

The instructor respondents accentuated in unison that the majority of the said language functions enumerated by the researcher were considered *very much relevant* in Purposive Communication. It was evidenced by an overall mean of 3.7834 with a standard deviation of .24801 clearly indicating homogeneity of responses.

Among the top language functions that were considered *very much relevant* in Purposive Communication by the respondents comprised of the following: "Asking for information" (Mean=3.95; SD=.229) and "Synthesizing" (Mean=3.95; SD=.229). In the same manner, the respondents strongly believed that the following language functions were *very much relevant*: "Expressing Opinions" (Mean=3.89; SD=.315); "Explaining" (Mean=3.89; SD=.315); "Clarifying" (Mean=3.89; SD=.315); "Evaluating" (Mean=3.89; SD=.315) and "Getting Specific Details" (Mean=3.89; SD=.315).

Meanwhile, it was determined that "Talking about personal habits" was only deemed as *moderately relevant* by the instructors as it obtained the lowest weighted mean of 3.32 and a standard deviation of .671.

##### 6.2 Language Forms

As a whole, the instructors firmly expressed that almost the entire list of language forms were considered *very much relevant* as supported by the overall mean of 3.7368 with a standard deviation of .33181 signifying the uniformity of responses.

In detail, the following language forms were considered by the College English instructors as *very much relevant* in Purposive Communication: "Present Tense" (Mean=3.89; SD=.315); "Past Tense" (Mean=3.89; SD=.315); "Present Perfect Tense" (Mean=3.84; SD=.375); "Past Perfect Tense" (Mean=3.84; SD=.375); "Subject-Verb Agreement"; (Mean=3.84; SD=.375) and "Prepositions" (Mean=3.84; SD=.375).

On the contrary, although it was regarded as *very much relevant* by the instructors, the "Interjections" obtained the lowest weighted mean of 3.42 with a standard deviation of .902.

#### 7. NeuroELT Pedagogy Activities on the Science of Happiness

After an in-depth examination of all the data obtained from various reliable sources, the researcher decided to design and develop NeuroELT activities anchored on the Science of Happiness to help address the gap discovered.

Specifically, the items that garnered the *lowest values* (Extent of the College English Instructors' Practice of the Science of Happiness, Instructors' Extent of Familiarity on the Brain-based Teaching Strategies that Promote the Science of Happiness in the College English Classroom, Instructors' Extent of Integration of the Various Science of Happiness Themes in the College English Classroom) as well as those items that obtained the *highest values* (Perceived Relevance of the English Language Components that need Enhancement Among the College Students in Purposive Communication Using the Science of Happiness) were then considered as bases for the output entitled, "NeuroELT Pedagogy in Purposive Communication (Celebrating Happiness in the College English Classroom via Brain-friendly Activities".

To ensure that the readers of the abovementioned course book will be properly oriented with regard to the topic, a primer on neuroeducation, an introduction on Positive Psychology and NeuroELT was provided prior to the activities.

#### CONCLUSIONS

Based from the findings of the study, the subsequent conclusions were drawn:

1. The College English instructors possess a generous effort to establish a relevant and dynamic learning environment through the use of instructional strategies like individualized, cooperative group, direct instruction, use of inquiry, small group work, classroom discussion, role playing/dramatization and games most of which advocate the NeuroELT maxims of collaboration, challenge, physical movement and choice.
2. The College English instructors need more adequate information and exposure on NeuroELT pedagogy activities that promote Science of Happiness such as the attributes of context-orientedness, differentiated instruction, prediction, novelty, positive surprise, creativity, simulation and



exploration among others to enhance their instructional practices.

3. The *knowledge, skills* and *attitudes* of the students were not fully or equally enhanced by the instructional strategies employed by their College English instructors due to lack of familiarity and implementation of the majority of the brain-based teaching strategies that may totally boost the learners' positive emotions.

4. Too much attention given on the cognitive (knowledge) and psychomotor (skills) domains of learning might drive the attention of the College English instructors away from conceptualizing and implementing instructional strategies such as NeuroELT pedagogy activities that aim to cultivate not only the affective realm but all the domains of learning hence producing holistic learners of English.

5. Aside from the high influence of the instructors' positive disposition among their students, the strong motivation of the learners to study and to succeed in their ambition in life as well as their high happiness index or set point and deliberate practice of happiness can possibly contribute in enhancing one's academic performance in College English especially their attitudes (affective).

6. The College English instructors are primarily reflective individuals who extract positive emotions from *savoring good things as they happen, valuing their friends and family, cultivating a "gratitude" attitude, coping with stress a lot better, reminiscing good things, doing kind things and fostering forgiveness*.

7. College English instructors find the following practices *performing exercise at least three times a week, volunteering oneself for a worthy cause in school or community activities, spending time with one's friends and family while avoiding all forms of distractions such as texting, surfing the Internet etc. when they are with them and expressing feelings in a peaceful means (non-threatening language) towards those people who hurt them how their actions affected them* difficult to practice.

8. The College English instructors' level of familiarity on the brain-based teaching strategies that promote Science of Happiness in the College English classroom depends on their level of exposure to these strategies that can be established through personal background, intentional effort or choice, continuing professional education programs (e.g. lectures, conferences, workshops etc.) as well as the frequency or extent of utilization of these strategies in their respective classrooms.

9. The College English instructors consider the relevance of teaching the virtue of *justice* such as loyalty to one's organizations, readiness to make

personal sacrifices for one's neighbors and socio-civic responsibility fundamental among the 21<sup>st</sup> century learners on top of the other virtues such as *humanity, wisdom and knowledge, transcendence, courage and temperance*.

10. The College English instructors certainly believe that the language functions *asking for information* and *synthesizing* are *very much relevant* in Purposive Communication to enable the learners to communicate with ease and substance in the English language.

11. The College English instructors unequivocally consider the language forms *present tense, past tense, present perfect tense, past perfect tense, subject-verb agreement* and *prepositions* *very much relevant* among the learners to communicate effectively in the 21<sup>st</sup> century.

## RECOMMENDATIONS

After a careful examination of findings and formulation of conclusions, the following are hereby proposed:

1. The College English instructors must continue in conceptualizing and implementing various instructional strategies for their learners that conform with NeuroELT vis a vis their practice of the Science of Happiness.

2. The College English instructors must revisit their manner of constructing lessons and activities ensuring that they promote a balance of the three domains of learning – cognitive, affective and psychomotor while integrating the Science of Happiness.

3. The College English instructors must maintain their vigor in *savoring good things as they happen, valuing their friends and family, cultivating a "gratitude" attitude, coping with stress a lot better, reminiscing good things, doing kind things and fostering forgiveness* through deliberately engaging or exposing themselves regularly in the activities that promote the said practices in and out of the classroom.

4. College English instructors need to devote their time in developing the following Science of Happiness practices through several NeuroELT Pedagogy Activities involving their learners:

4.1 *Performing exercise at least three times a week*

4.2 *Volunteering oneself for a worthy cause in school or community activities*

4.3 *Spending time with one's friends and family while avoiding all forms of distractions such as texting, surfing the Internet etc. when they are with them*



4.4 *Expressing feelings in a peaceful means (non-threatening language) towards those people who hurt them how their actions affected them.*

5. Professional trainings, seminars and workshops spearheaded by experts about NeuroELT or brain-compatible teaching strategies in English Language Teaching (ELT) must be conducted so that the instructors of College English may acquire relevant and adequate tools to raise their level of familiarity on the said teaching strategies that promote Science of Happiness in the classroom especially the application of NeuroELT attributes of context-orientedness, differentiated instruction, prediction, novelty, positive surprise, creativity, simulation and exploration among others.

6. The College English instructors may try the NeuroELT pedagogy activities output of this research to integrate the virtues of *justice, humanity, wisdom and knowledge, transcendence, courage and temperance* in the classroom.

7. The College English instructors may pilot test the NeuroELT Pedagogy activities of this study to develop the language functions particularly *asking for information* and *synthesizing* along with the language forms *present tense, past tense, present perfect tense, past perfect tense, subject-verb agreement* and *prepositions* among others which were all considered *very much relevant* in Purposive Communication among the learners to communicate effectively in the 21<sup>st</sup> century.

8. Research projects may be undertaken on the following:

8.1 The application of Science of Happiness in the English Language Teaching (ELT) such as the effectiveness of the NeuroELT pedagogy activities developed in this study;

8.2 The relationship of the instructors' practices of the Science of Happiness and academic performance of the students, and;

8.3 A replica of this study using other participants from other institutions.

9. Centro Escolar University may explore the possibility of integrating in their English Language curricula or possibly in other disciplines the Science of Happiness (Positive Psychology) to produce graduates who are totally imbued with competence and character carefully designed for a rewarding global employment while making a name as one of the few universities in the Philippines that advocates brain-compatible education vis a vis positive schooling.

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## REFERENCES

- [1] Marc Helgesen (2011) Modules in teaching English to speakers of other languages (TESOL). iTECC: Makati City.
- [2] John W. Santrock (2012) Educational psychology, 5<sup>th</sup> edition. Philippines: McGraw-Hill.
- [3] David Sousa et al. (2010) Mind, brain and education. U.S.A.: Solution Tree Press.
- [4] Mary Helen Immordino-Yang & Antonio Damasio (2007) We feel, therefore we learn: the relevance of affective and social neuroscience to education. International Mind, Brain and Education Society and Blackwell Publishing, Inc. Volume 1, No. 1.
- [5] Tracey Tokuhama-Espinosa (2011) Mind, brain and education science. U.S.A.: Hamilton Printing.
- [6] Marc Helgesen (2011) Modules in teaching English to speakers of other languages (TESOL). iTECC: Makati City.
- [7] M. Pandey & P. Pandey (2014) Better English for better employment opportunities. International Journal of Multi-disciplinary Approach.

- Retrieved August 31, 2015 from file:///C:/Users/User/Downloads/10.04.2014.pdf
- [8] Pearl G. Ilustre (2015) Talk on TBLT and Senior High School. CEU: Manila.
- [9] Cutis Kelly & Chuck Sandy (2008) Brain-based learning and the active approach. The Language Teacher.
- [10] M.L. Langlie (2008) The effect of culturally relevant pedagogy on the mathematics achievement of black and Hispanic high school students. Ph.D. Dissertation. Northeastern University, Boston, Massachusetts.
- [11] Jandy Jeppson, Judith A. Myers- Walls & Dee Love (2008) Brain development. Retrieved October 1, 2016 from <https://www.extension.purdue.edu/providerparent/child%20growth-development/BrainDev.htm>
- [12] Jack P. Shonkoff and Deborah A. Phillips (eds). (2000) From Neurons to Neighbourhoods: The science of early child development, National Academy Press, Washington, DC.
- [13] David Sousa (2011) How the brain learns, 4<sup>th</sup> edition. U.S.A.: Sage Company.
- [14] Martin E. P. Seligman (2000) Positive psychology: an introduction. American Psychological Association, Inc. 55 (1), 5.
- [15] Marc Helgesen (2015a). ELT & the science of happiness. Retrieved July 8, 2015 from <http://www.eltandhappiness.com/>
- [16] Mary Helen Immordino-Yang & Antonio Damasio (2007) We feel, therefore we learn: the relevance of affective and social neuroscience to education. International Mind, Brain and Education Society and Blackwell Publishing, Inc. Volume 1, No. 1.
- [17] Cutis Kelly & Chuck Sandy (2008) Brain-based learning and the active approach. The Language Teacher.
- [18] David Sousa (2011) How the brain learns, 4<sup>th</sup> edition. U.S.A.: Sage Company.
- [19] Patricia Wolfe (2010) Brain matters: Translating research into classroom practice, 2<sup>nd</sup> edition. U.S.A.: ASCD Publications.
- [20] Tracey Tokuhama-Espinosa (2011) Mind, brain and education science. U.S.A.: Hamilton Printing.
- [21] Karla Gutierrez (2013) Happy students learn better! Foster positive emotions in every course you make. Retrieved July 7, 2015 from <http://info.shiftelearning.com/blog/bid/326918/Happy-Students-Learn-Better-Foster-Positive-Emotions-in-Every-Course-You-Make>
- [22] David Sousa (2011) How the brain learns, 4<sup>th</sup> edition. U.S.A.: Sage Company.
- [23] Ryan Zaro (2013) The use of positive psychology in the classroom. Master's Thesis. Sierra Nevada College.
- [24] Sonja Lyubomirsky (2007) The how of happiness. Penguin Books: U.S.A.
- [25] Christopher Peterson & Martin E. P. Seligman (2004). Character strengths and virtues: A handbook and classification. New York: Oxford University Press and Washington, DC: American Psychological Association [www.viacharacter.org](http://www.viacharacter.org)
- [26] History of happiness. Retrieved July 8, 2015 from <http://www.pursuit-of-happiness.org/history-of-happiness/>
- [27] M. Popova (2015) Flourish: the father of positive psychology redefines well-being. Retrieved July 7, 2015 from <http://www.brainpickings.org/2011/04/05/martin-seligman-flourish/>
- [28] Martin E. P. Seligman (2010). Flourish: positive psychology and positive interventions. The Tanner lectures on human values. Speech delivered at the University of Michigan.
- [29] (2011) How to flourish and feel better fast. Whole Living. May 2011 issue.
- [30] C. N. Tebeau (2011). Martin Seligman, author of "Authentic Happiness," now wants us to flourish. Retrieved July 8, 2015 from <https://newvinegrowing.wordpress.com/2011/10/28/martin-seligman-author-of-authentic-happiness-now-wants-us-to-flourish/>
- [31] Karin Kirk (2017). What is the affective domain anyway? Retrieved January 14, 2017 from <http://serc.carleton.edu/NAGTWorkshops/affective/intro.html>
- [32] David Sousa (2011) How the brain learns, 4<sup>th</sup> edition. U.S.A.: Sage Company.
- [33] John W. Santrock (2012) Educational psychology, 5<sup>th</sup> edition. Philippines: McGraw-Hill.
- [34] B. L. Fredrickson, B. L., R. A. Mancuso, C. Branigan, & M. M. Tugade, (2000). The undoing effect of positive emotions. Motivation and Emotion, 24, 237-258.
- [35] R. Alber (2015) How are happiness and learning connected? Retrieved June 19, 2015 from <http://www.edutopia.org/blog/happiness-learning-connection-rebecca-alber>
- [36] Martin E. P. Seligman (2015) Resilience training for educators. Retrieved August 9, 2015 from <https://www.authentic-happiness.sas.upenn.edu/learn/educatorresilience>

- [37] Karla Gutierrez (2013) Happy students learn better! Foster positive emotions in every course you make. Retrieved July 7, 2015 from <http://info.shiftelearning.com/blog/bid/326918/Happy-Students-Learn-Better-Foster-Positive-Emotions-in-Every-Course-You-Make>
- [38] Jesus Alfonso Datu (2012) Introduction to the special issue on positive psychology. International Journal of Research Studies in Psychology. Vol. 1 No. 3, 3-6.
- [39] Marc Helgesen (2015d). ELT and the "Science of Happiness." Retrieved July 7, 2015 from <http://www.koreatesol.org/sites/default/files/pdf/Helgesen-Workshop.pdf>
- [40] Mary Helen Immordino-Yang & Antonio Damasio (2007) We feel, therefore we learn: the relevance of affective and social neuroscience to education. International Mind, Brain and Education Society and Blackwell Publishing, Inc. Volume 1, No. 1.
- [41] Judy Willis (2006) Research-based strategies to ignite student learning. Association for Supervision and Curriculum Development (ASCD): U.S.A.
- [42] Tracey Tokuhama-Espinosa (2011) Mind, brain and education science. U.S.A.: Hamilton Printing.
- [43] K. G. Griffith & A. D. Nguyen. (2006) Are educators prepared to affect the affective domain? National Forum of Teacher Education Journal, Volume 16, Number 3.
- [44] K. G. Griffith & A. D. Nguyen. (2006) Are educators prepared to affect the affective domain? National Forum of Teacher Education Journal, Volume 16, Number 3.
- [45] Sonja Lyubomirsky (2015) "Eight steps towards a more satisfying life" Retrieved October 16, 2015 from <http://www.centreforconfidence.co.uk/pp/techniques.php?p=c2lkPTI=Huebner>,
- [46] Marc Helgesen (2015d). ELT and the "Science of Happiness." Retrieved July 7, 2015 from <http://www.koreatesol.org/sites/default/files/pdf/Helgesen-Workshop.pdf>
- [47] Sonja Lyubomirsky (2007) The how of happiness. Penguin Books: U.S.A.
- [48] Suval, L. Happiness and choices. Retrieved August 9, 2015 from <http://psychcentral.com/blog/archives/2012/01/11/happiness-and-choices/>
- [49] John Medina. (2014) Brain rules. Pear Press: U.S.A.
- [50] Cutis Kelly & Chuck Sandy (2008) Brain-based learning and the active approach. The Language Teacher.
- [51] Ryan Zaro (2013) The use of positive psychology in the classroom. Master's Thesis. Sierra Nevada College.
- [52] K. Layous, S. K. Nelson, & S. Lyubomirsky (2012) "What is the optimal way to deliver a positive activity intervention? Springer Science+Business Media B.V
- [53] Martin E. P. Seligman (2015) Resilience training for educators. Retrieved August 9, 2015 from <https://www.authentichappiness.sas.upenn.edu/learn/educatorresilience>
- [54] E. S. Huebner, R. Gilman & S. M. Suldo (2006) Life satisfaction. In G. Bear & K. Minke (Eds.), Children's needs III (pp. 357-368). Bethesda, MD: National Association of School Psychologists.
- [55] N. Noddings (2003) Happiness and education. Cambridge, UK: Cambridge University Press.
- [56] Marc Helgesen (2015d) ELT and the "Science of Happiness." Retrieved July 7, 2015 from <http://www.koreatesol.org/sites/default/files/pdf/Helgesen-Workshop.pdf>
- [57] Cutis Kelly & Chuck Sandy (2008) Brain-based learning and the active approach. The Language Teacher.
- [58] G. Gregory & T. Parry (2006) Designing brain-compatible learning. Corwin Press: California.
- [59] Pearl Gaborno-Illustre & Arlene Salve-Opina (2015) Developing NeuroELT strategies for integrated language lessons. International NeuroELT Conference Proceedings. iTECC: Makati City.
- [60] Marc Helgesen (2015a). ELT & the science of happiness. Retrieved July 8, 2015 from <http://www.el tandhappiness.com/>

- [61] Marc Helgesen (2015a). ELT & the science of happiness. Retrieved July 8, 2015 from <http://www.eltandhappiness.com/>
- [62] Martin E. P. Seligman (2015) Resilience training for educators. Retrieved August 9, 2015 from <https://www.authentic happiness.sas.upenn.edu/learn/educatorresilience>
- [63] John W. Creswell (2003) Research design: qualitative, quantitative and mixed methods approaches. Sage Publications: California, USA.



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**Approval Sheet For the Conduct of Scientific Procedures Using Human Subjects**

☐ Undergraduate Research   
 ☒ Graduate Research   
 ☐ Faculty Research

School/College/Department/Program: School of Education, Liberal Arts, Music and Social

Research Title: SCIENCE OF HAPPINESS PRACTICES OF COLLEGE ENGLISH INSTRUCTORS WORK  
OF HIGHER EDUCATION INSTITUTIONS TOWARDS THE DEVELOPMENT OF NEUROBELT  
PEDAGOGY

Revised Title: Science of Happiness Practices of College  
English Instructors Toward the Development of NeuroBELT  
Pedagogy: The CEU experience

Lead Researcher: ALVIN SANTOS SICAT 0916 2999840

Co - Researchers:  
N/A

Purposes of the conduct of Scientific Procedures (encircle one or more):

- a. Biomedical research, experiment, studies, investigation (including pre-clinical research)
- ☒ b. Teaching and instruction
- c. Product testing
- d. Production of antisera or other biologicals

I certify that the statements made herein are correct and true.

DR. NILAGROS L. BORABO / ALVIN S. SICAT      TERESITA G. CAREY, D.A.L.L.  
 Signature of Adviser/ Lead Researcher      Signature of Dean  
 Date: September 9, 2015      Date: \_\_\_\_\_

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IERC Member

IERC Member

IERC Member

IERC Member

IERC Member

Subject Specialist/s:

Subject Specialist

Subject Specialist

Recommending approval:

[Signature]  
IERC Chair

Note: If approved, the IERC shall specify that no major deviations from or changes in the protocol should be done without prior IERC approval.

Copies to: IERC Chair; Lead Researcher

REF 012  
04/19/2011 Rev. 1

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**CENTRO ESCOLAR UNIVERSITY**  
Manila \* Makati \* Malolos  
Research and Evaluation Office

**INFORMED CONSENT**

Research Title: SCIENCE OF HAPPINESS PRACTICES OF COLLEGE ENGLISH INSTRUCTORS TOWARDS THE DEVELOPMENT OF NEURCELIT PEDAGOGY: THE CEU EXPERIENCE

Purpose/s: To determine the Science of Happiness practices of College English instructors specifically in Centro Escolar University (3 campuses), the results of which will serve as basis for the development of NEURCELIT pedagogy activities (brain-compatible) activities in ELP.

Procedure/s:	Name	Discomfort/ Risks	Recovery Time
	Survey Questionnaire	N/A	N/A

Benefits/Compensation: The participants will obtain relevant and adequate information on the applied Science of Happiness (positive psychology) practices as well as brain-compatible activities in the teaching of College-English better known as NEURCELIT activities.

Subject-participant shall: (1) receive adequate and immediate medical treatment should complication arise; (2) receive full and adequate compensation and indemnification in case harm or injury arise out of participation; and (3) be free to withdraw his/her consent and to discontinue participation in the research anytime without prejudice to him/her and no explanation is required.

The researchers shall: (1) answer at anytime, any inquiry of subject-participant concerning the procedure; (2) preserve anonymity and respect full confidentiality; and (3) be fully responsible and accountable for all complications, injury, compensation, and the like to subject-participant as a result of any or all of the procedures.

**SUBJECT-PARTICIPANT**

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Birthday: \_\_\_\_\_ Signature: \_\_\_\_\_

Parent's/Guardian's Name and Signature: \_\_\_\_\_

**RESEARCHER/S**

Name	Participation	Signature	Date
ALVIN S. SICAT	Lead Researcher	<i>Alvin S. Sicat</i>	November 25, 2015

Copies to: Researchers; Research and Evaluation Office

REF - 013  
REV 1